Message

From: Wilson, Patrick [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=841477851C614E1981C54C0372591BFE-PWILSON]
Sent: 7/1/2017 12:13:26 AM
To: Jeng, Cy@DTSC [Cy.Jeng@dtsc.ca.gov]
Subject: RE: PCBs

Got it – I see now CY.

1) I am not aware of any deficiencies regarding versions A and B of this method. Please try to get a list or document that lists the deficiencies from the EPA Toxicologists. I would like to discuss with my analyst.

At some point - we were provided the reasons that the Agency moved from the A & B methods to the C version. As I recall – there were validation issues with the A & B versions of the method.

We have memorialized this somewhere in our files. We can pick this up next week – but I'll do some digging or touch base w/EPA HQ to provide the info.

Talk more soon -

From: Jeng, Cy@DTSC [mailto:Cy.Jeng@dtsc.ca.gov]
Sent: Friday, June 30, 2017 5:01 PM
To: Wilson, Patrick <Wilson.Patrick@epa.gov>
Subject: RE: PCBs

Patrick,

Sorry for the chain of emails with mixed information. Please direct the attention to the latest email by Carol today, especially items 2, 3, and 5. We can chat some more or arrange a quick call with Carol next week if you have questions.

Have a great weekend!

CY

From: Wilson, Patrick [mailto:Wilson.Patrick@epa.gov]
Sent: Friday, June 30, 2017 4:52 PM
To: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>
Subject: RE: PCBs

"With that said, the latest version of method 8082 is 8082A, for method 8270 is 8270D, and for method 1668 is 1668C."

CY – I believe what she says here is consistent with my thoughts on 1668?

Namely 1668c?

I can engage w/EPA HQ if necessary. John Beach & I initiated in-depth discussions with our EPA HQ Lab Methods development team on the use of 1668c before recommending it for Ag Park on-site analysis. John was concerned about potential interferences with the congener profiles. We came away from those discussions believing that 1668c was now the Agency's preferred & recommended method for congener analysis of compounds with dioxin-like activity.

EPA HQ provided us with a list of commercial labs approved for this level of analysis.

From: Jeng, Cy@DTSC [mailto:Cy.Jeng@dtsc.ca.gov]
Sent: Friday, June 30, 2017 4:26 PM
To: Wilson, Patrick <Wilson.Patrick@epa.gov>
Cc: Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>; Wortham, Carol@DTSC <Carol.Wortham@dtsc.ca.gov>
Subject: FW: PCBs

Hi Patrick,

Shukla had a chance to discuss Method 1668C with the DTSC laboratory advisor Carol Wortham, and below are her thoughts. There seems to be somewhat different opinions on which version(s) to use. To be frank, we had only a very brief conversation on this topic so I could have mis-interpret your suggsetion. Nonetheless, I thought it's worthwhile to follow up with you for clarification or additional information that you may have and we are not aware of. Please advise.

Thanks, CY

From: Wortham, Carol@DTSC
Sent: Friday, June 30, 2017 4:02 PM
To: Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>
Subject: RE: PCBs

Hello Shukla,

Sorry for the delay, I got caught up with other projects. Here is a summary of what we discussed in our call.

1) Method 1668(A, B, or C) is not listed as an approved Clean Water Act Chemical Test Method. It is listed under Other Clean Water Act Test Methods Not Approved Under 40CFR Part 136.

2) The two laboratories who participated in the round robin validation testing do not offer this version of the method at their own laboratories without modifications. I checked two other laboratories that I personal respect and they do not offer this version of the method at their laboratories.

3) I am not aware of any deficiencies regarding versions A and B of this method. Please try to get a list or document that lists the deficiencies from the EPA Toxicologists. I would like to discuss with my analyst.

4) High Resolution Mass Spectrometer (MS) methods (1668) have very strict guidelines associated with the methods. There is not much room for deficiencies. Monitoring standards are added during different stages of the preparation process in order to monitor the analysis. They act much like the surrogate compounds added to standard organic methods. They provide specific feedback about the matrix effects on the analysis.

5) One of the biggest contentions about method 1668C is the requirement of a Method Detection Limit (MDL) study in a clean matrix. Because the matrix is clean, the values are quite low. The High Resolution MS performs a real time MDL type determination with every sample. It is referred to as an Estimated Detection Limit (EDL) or Instrument Detection Limit (IDL). While the system is analyzing for the compounds of interest, it is also comparing the background noise of the instrument due to matrix to the signal of the compounds and determining the EDL. It does it for every sample and takes into account influence from the sample matrix where the MDL in the method does not. The EDL is closer to the true detection limit for that specific sample where the MDL will be bias lower because of the clean matrix.

This version of the method has not been well received by the commercial laboratory community. I believe you will find it difficult to find laboratories who will perform this method without modifications. I know of one laboratory whose modifications have basically taken it back to version B.

I suggest that you get more details from the toxicologist regarding the deficiencies with the earlier versions of the method. My analyst and I would be interested and might be able to evaluate them for you. Then you could decide if they would cause a problem with your objectives.

Thank You,

Carol Wortham

From: Roy-Semmen, Shukla@DTSC
Sent: Friday, June 30, 2017 9:16 AM
To: Wortham, Carol@DTSC <Carol.Wortham@dtsc.ca.gov>
Cc: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>; Bosan, William@DTSC <William.Bosan@dtsc.ca.gov>; Neuwirth, Efrem@DTSC <Efrem.Neuwirth@dtsc.ca.gov>
Subject: RE: PCBs

Hi Carol,

Thanks for getting back to me. Yes, I can call you at the number you left me. Talk to you soon.

Shukla

From: Wortham, Carol@DTSC
Sent: Friday, June 30, 2017 8:22 AM
To: Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>
Cc: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>; Bosan, William@DTSC <William.Bosan@dtsc.ca.gov>; Neuwirth, Efrem@DTSC <Efrem.Neuwirth@dtsc.ca.gov>
Subject: RE: PCBs

Hello Shukla,

Are you available to discuss over the phone today? I am available between 10 and 1 today.

Thanks,
Carol

From: Roy-Semmen, Shukla@DTSC
Sent: Tuesday, June 20, 2017 3:23 PM
To: Wortham, Carol@DTSC <Carol.Wortham@dtsc.ca.gov>
Cc: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>; Bosan, William@DTSC <William.Bosan@dtsc.ca.gov>; Neuwirth, Efrem@DTSC <Efrem.Neuwirth@dtsc.ca.gov>
Subject: RE: PCBs

Hi Carol,

Thank you so much. This is very helpful. We will discuss internally and ask for additional advice if necessary.

Shukla Roy-Semmen, Ph.D.

Staff Toxicologist
Department of Toxic Substances Control
California Environmental Protection Agency
5796 Corporate Avenue
Cypress, CA 90630
Phone: 714-484-5448

From: Wortham, Carol@DTSC
Sent: Tuesday, June 20, 2017 2:59 PM
To: Roy-Semmen, Shukla@DTSC <Shukla.Roy-Semmen@dtsc.ca.gov>
Cc: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>; Bosan, William@DTSC <William.Bosan@dtsc.ca.gov>; Neuwirth, Efrem@DTSC <Efrem.Neuwirth@dtsc.ca.gov>
Subject: RE: PCBs

Hello Shukla,

Let's see if I can help.

1) I ended up helping write the wipe sampling process in the Electronic Waste Shredder Sampling Guidance document for the FY 16/17 Initiative. I attached a copy for reference. Something to keep in mind is that PCBs do not tend to be very water soluble since they are usually oils. You might need to use Hexane to do a proper PCB wipe and then you have to deal with a solvent out in the field.

2) The analyst should be able to identify the Aroclors correctly. The individual concentrations may be affected by interference from overlapping Aroclors and you can only adjust so much for that. In setting up the method you try to identify peaks in each Aroclor that are not present in any overlapping/interfering Aroclor. This way the lab should be able to minimize bias due to overlapping Aroclors. It can be rather difficult so you may have a bias involved. This bias would affect the individual Aroclor result. When you add them together, you include the bias in that result. I know that the HW criteria for PCBs is based off a total value if that helps at all.

3) Something to keep in mind, Method 680 was written back in November 1985 and I am not aware of any updates for the method. The instruments alone have improved much since then. Another thing to keep in mind is that ELAP has not been able to accredit labs to the latest versions of EPA methods because Title 22 has not authorized their use. If you want a lab to only use methods listed in their accreditation, earlier versions will need to be accepted.
With that said, the latest version of method 8082 is 8082A, for method 8270 is 8270D, and for method 1668 is 1668C. Keep in mind that the preparation methods are separate and also have earlier and later versions.

Please let me know if you have any other questions.

Thank You,

Carol Wortham

Quality Management Officer
Environmental Chemistry Laboratory
(510) 540-3968

From: Roy-Semmen, Shukla@DTSC
Sent: Monday, June 19, 2017 11:07 AM
To: Wortham, Carol@DTSC <Carol.Wortham@dtsc.ca.gov>
Cc: Jeng, Cy@DTSC <Cy.Jeng@dtsc.ca.gov>; Bosan, William@DTSC <William.Bosan@dtsc.ca.gov>; Neuwirth, Efrem@DTSC <Efrem.Neuwirth@dtsc.ca.gov>
Subject: PCBs

Hello Carol,

The Human and Ecological Risk Office (HERO) is putting a HHRA Note on PCBs together and we have a few questions on the sampling/analytical portion.

1) Does ECL have a specific or recommended protocol for collecting wipe samples? This was brought up by one of our reviewers.

2) Under EPA method 8082, is it acceptable to add up the concentrations of various Aroclor mixtures to come up with a "Total PCB" concentration, or would it result in double counting due to overlapping of the profiles in the chromatogram?

3) We are listing three different laboratory methods for analyzing PCBs: EPA 8082 (aroclors), EPA 680/8270 (homologs) and EPA 1668C (for congeners). Communications with one of the USEPA Toxicologists indicates that Method 1668 "C" is the latest and recommended method for congeners. What is the latest for EPA 8082 and EPA 680/8270 and are earlier versions also acceptable for these methods?

Thanks for your help.

Shukla Roy-Semmen

Staff Toxicologist

Human and Ecological Risk Office

Department of Toxic Substances Control

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Cypress, California 90630